

MARINE GENSETS DIESEL ENGINE

General Catalog



DAIHATSU

DAIHATSU DIESEL MFG.CO.,LTD.

Next Stage

Advancing toward a New Horizon

Our clean and powerful "e-Diesel" is packed with top-level quality and technologies that Daihatsu Diesel has accumulated and refined over many years since the foundation of the company in 1907.

Daihatsu Diesel's history is marked by relentless challenges toward achieving the engine performance demanded by the changing times and meeting new needs.

This challenging spirit is unchanged today and will continue into the future.

Daihatsu's e-Diesel is constantly advancing in order to deliver the ultimate performance that only a continually evolving company can attain.



DAIHATSU DIESEL
Since 1907



6DE-23

8DE-33

Power generation output chart		Output
DE series	DE-18	DE-18
	DE-20	DE-20
	DE-23	DE-23
	DEL-23	DEL-23
	DE-28	DE-28
	DE-33	DE-33
DC series	DC-32e	DC-32e
DK series	DK-20e	DK-20e
	DK-26e	DK-26e
	DK-28e	DK-28e
	DK-36e	DK-36e
DL series	DL-16Ae	DL-16Ae
M series	M5	M5
Marine equipment		Equipment
Moriyama/Himeji factory		Factories
Service network		Network



Continually refining technologies All for achieving higher reliability

For the safe and reliable operation of a marine power generator, nothing is more important than the stable operation of the diesel engine. Daihatsu Diesel continually verifies accumulated knowhow and data and reflects them in product development. One of the most important performance factors, "reliability," achieved through those efforts is bolstered by all the parts and components that comprise the diesel engine. Our engines are at work even at this very moment to help maintain safe and worry-free operation of ships on all the seas and oceans around the world.

Clean & Powerful

e-Diesel engines are gentle to the earth's environment. They boast reduced NOx emissions as well as high fuel efficiency for reduced CO₂ emissions.



Certified by eight classification societies in the world

ABS(American Bureau of Shipping), BV(Bureau Veritas),
CCS(China Shipping Classification Association),
DNV-GL, KR(Korean Register of shipping), LRS(Lloyd's Register of Shipping),
NK(Nippon Kaiji Kyokai),
RS(Russian Maritime Register of Shipping)



ABS



BV



CCS



DNV-GL



KR



LRS

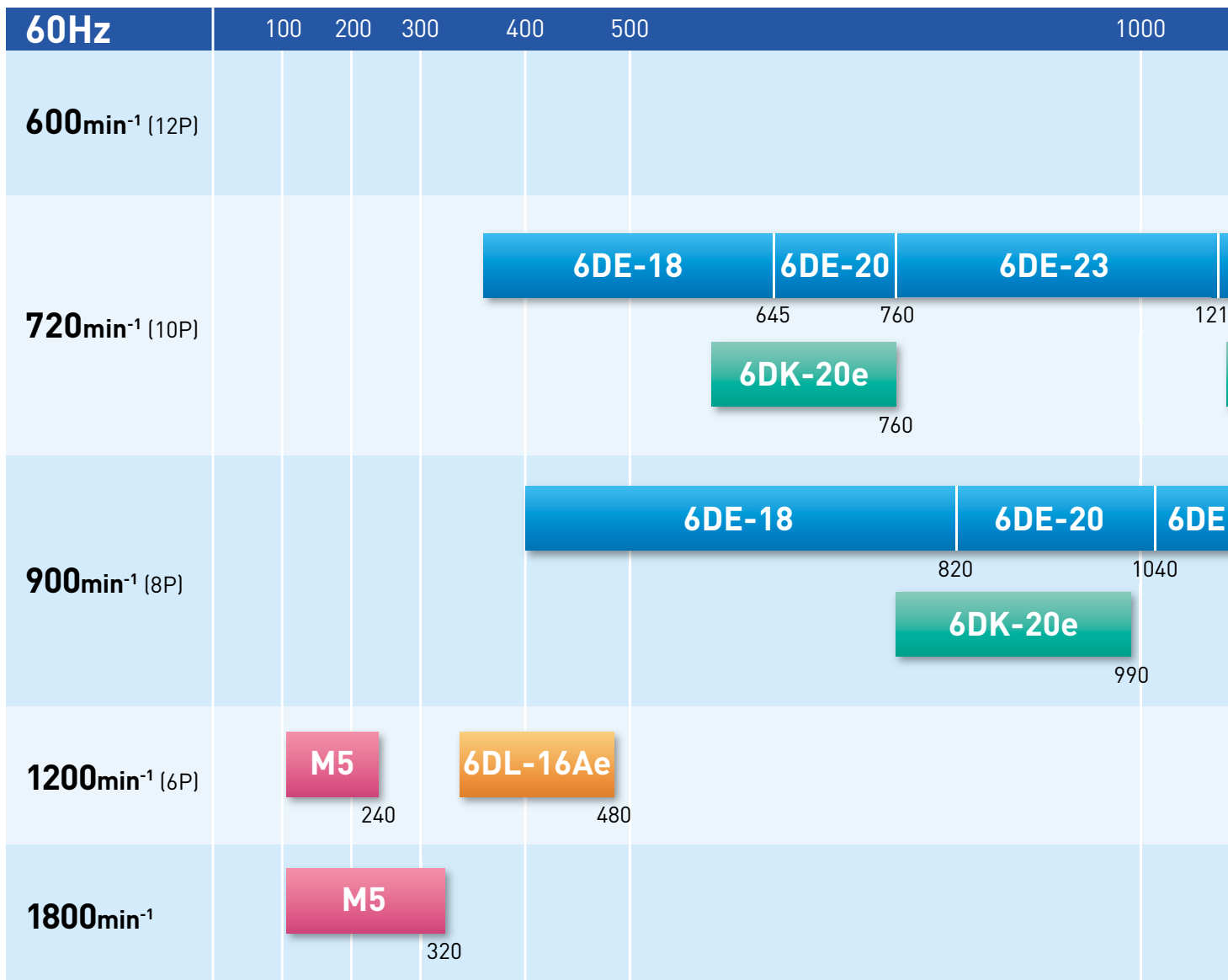


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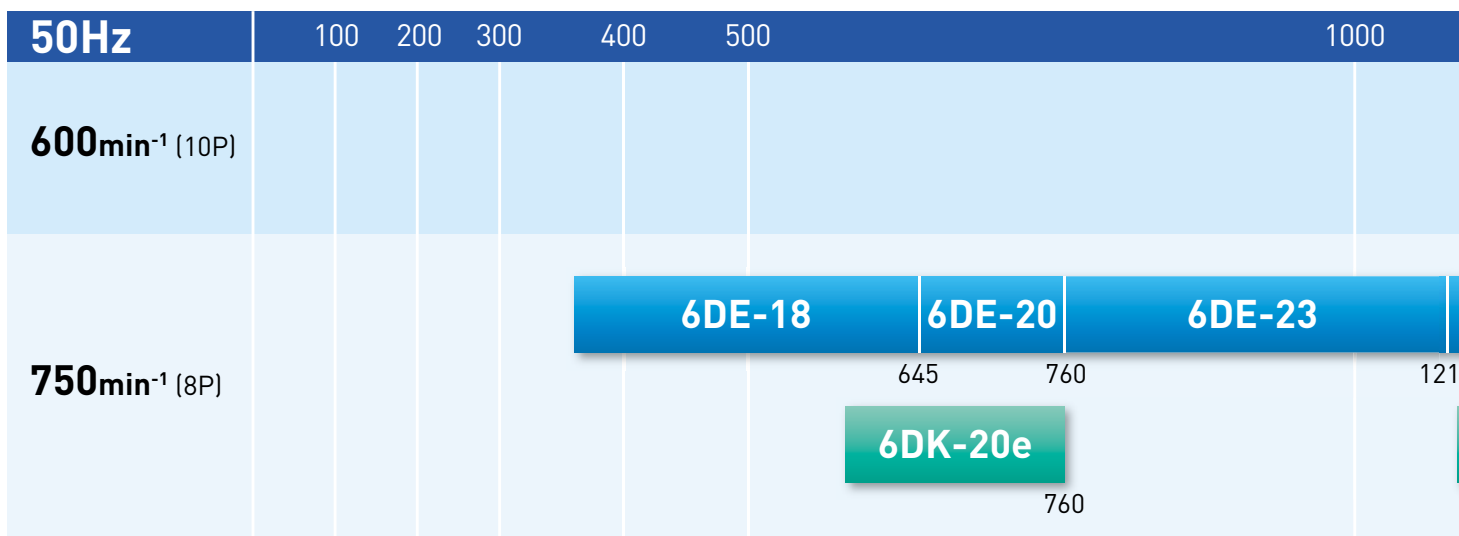


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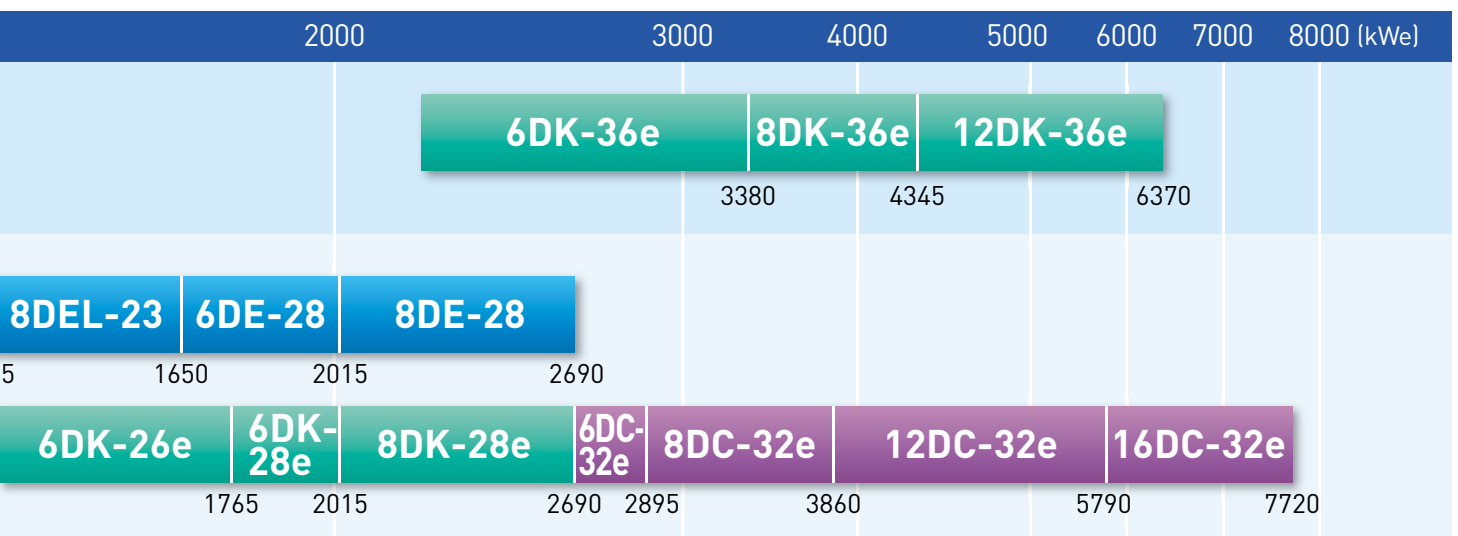
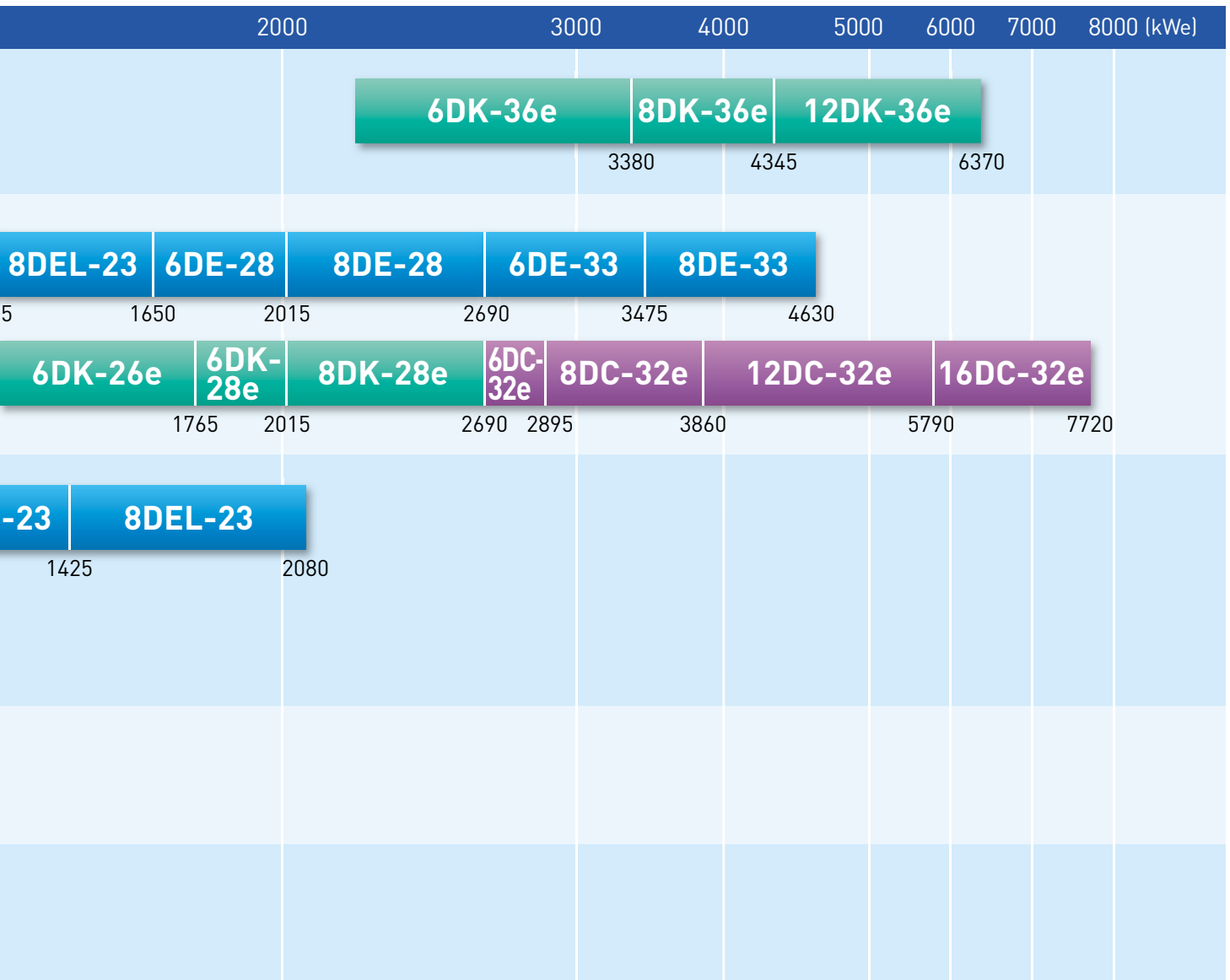
■ Engine output chart



Output values vary depending on generator efficiency.



Output values vary depending on generator efficiency.

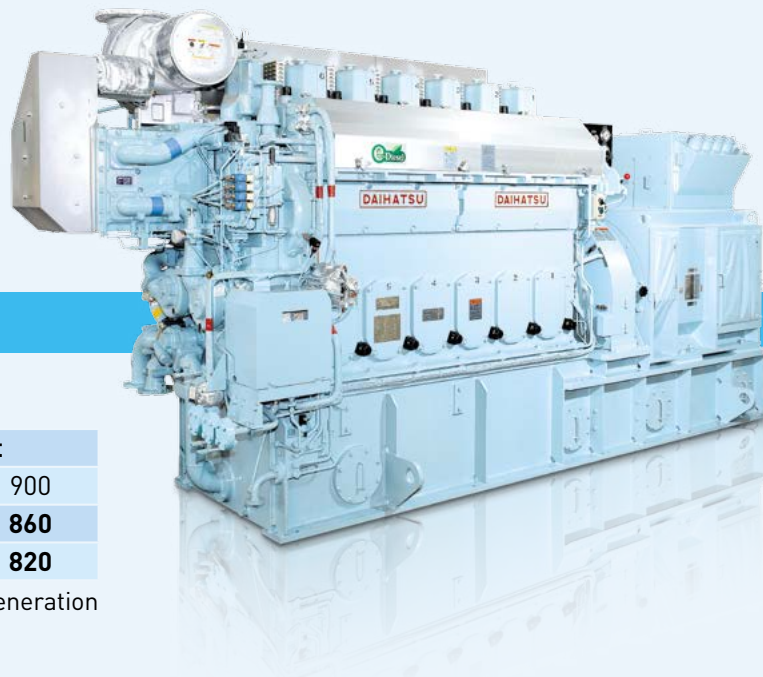


- Output
- DE-18
- DE-20
- DE-23
- DEL-23
- DE-28
- DE-33
- DC-32e
- DK-20e
- DK-26e
- DK-28e
- DK-36e
- DL-164e
- M5
- Equipment
- Factories
- Network

DE-18

Main data

Cylinder bore : 185mm
 Piston stroke : 280mm
 No. of cylinder : 6
 Pme : 2.5MPa
 Piston speed : 8.4m/sec.(at 900min⁻¹)
 6.72m/sec.(at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

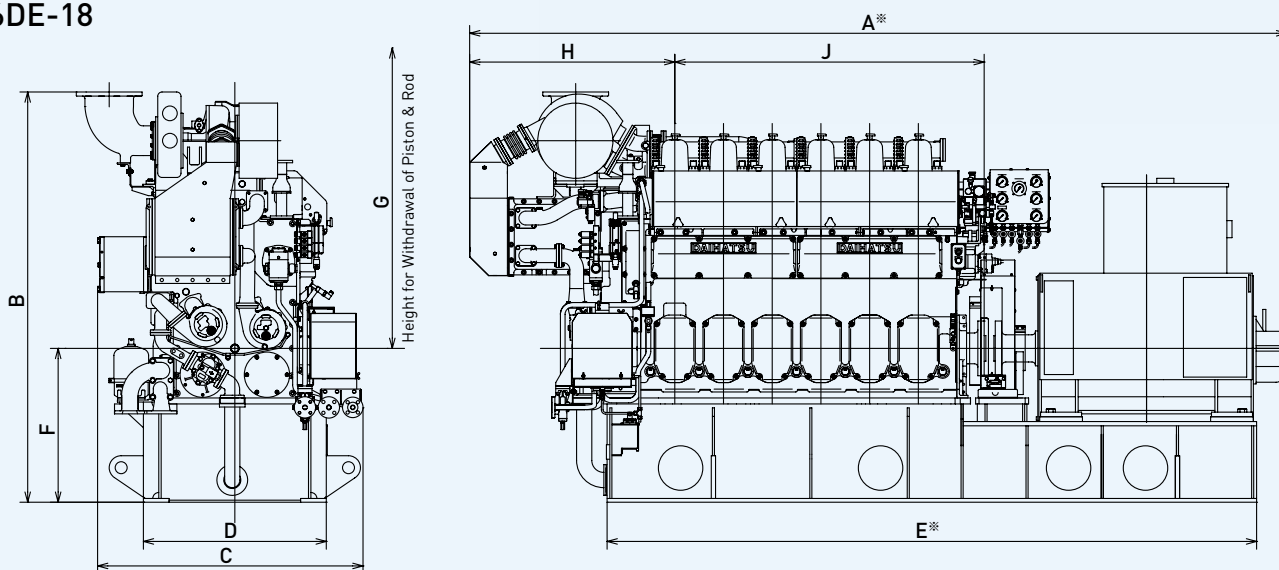


Main specifications

Model	Output			
	Engine speed (min ⁻¹)	720/750	900	
6DE-18	Engine	kWm	680	860
	Generator	kWe	645	820

The generator output values are based on power generation efficiency of approximately 95%.

6DE-18



Dimensions and weights

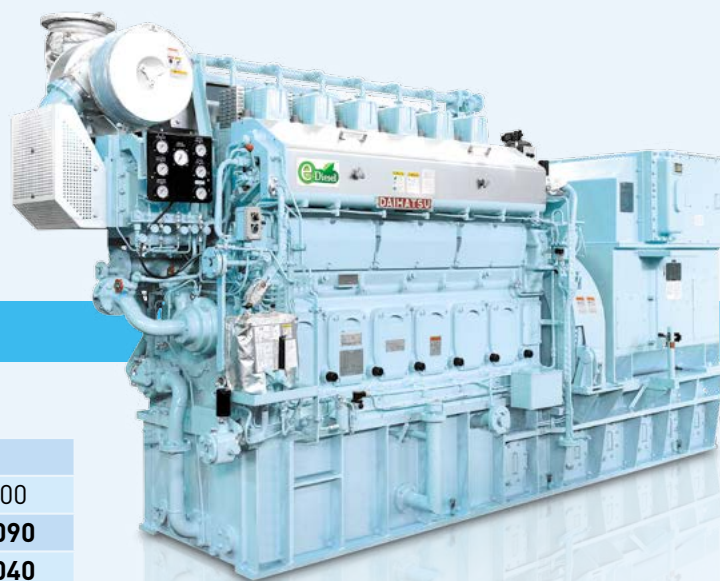
Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DE-18	4850	2400	1540	1070	3820	900	1400	1200	1810	13.0

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DE-20

Main data

Cylinder bore : 205mm
 Piston stroke : 300mm
 No. of cylinder : 6
 Pme : 2.16 ~ 2.45MPa
 Piston speed : 9.00m/sec. (at 900min⁻¹)
 7.20m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO



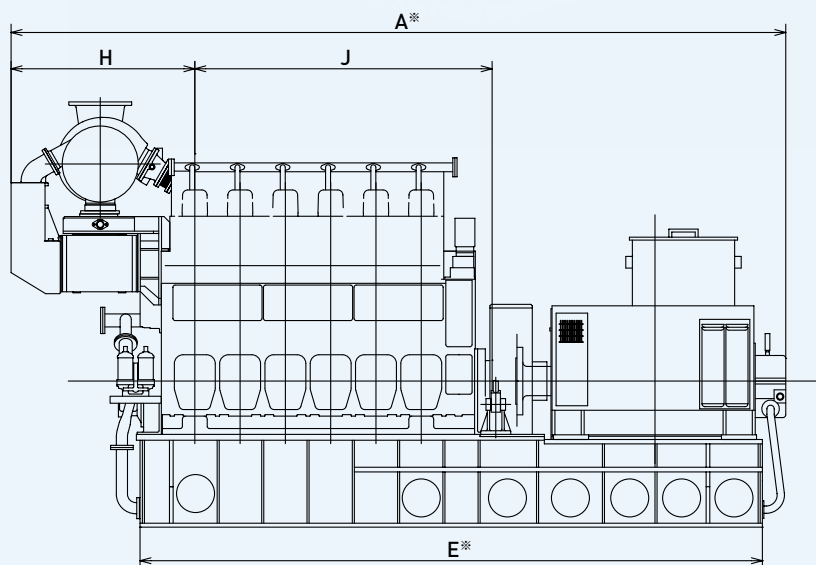
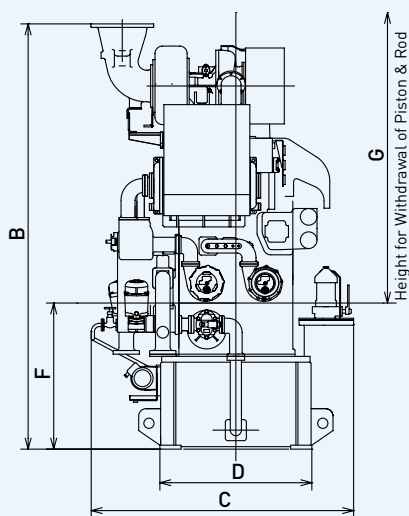
- Output
- DE-18
- DE-20
- DE-23
- DEL-23
- DE-28
- DE-33
- DC-32e
- DK-20e
- DK-26e
- DK-28e
- DK-36e
- DL-16Ae
- M5
- Equipment
- Factories
- Network

Main specifications

Model	Engine speed (min ⁻¹)		Output	
			720/750	900
6DE-20	Engine	kWm	800	1090
	Generator	kWe	760	1040

The generator output values are based on power generation efficiency of approximately 95%.

6DE-20



Dimensions and weights

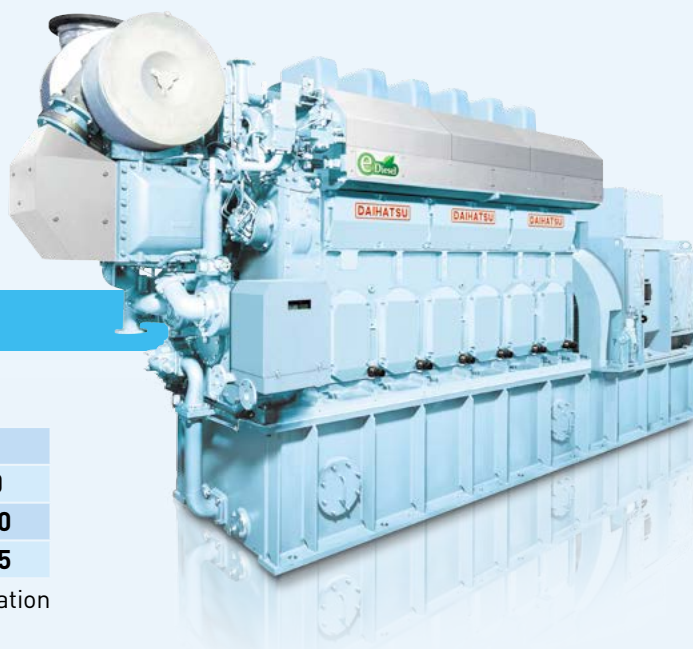
Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DE-20	5480	2890	1800	960	4430	1000	1575	1240	2035	16.0

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DE-23

Main data

Cylinder bore : 230mm
 Piston stroke : 320mm
 No. of cylinder : 6
 Pme : 2.5MPa
 Piston speed : 9.6m/sec. (at 900min⁻¹)
 7.68m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

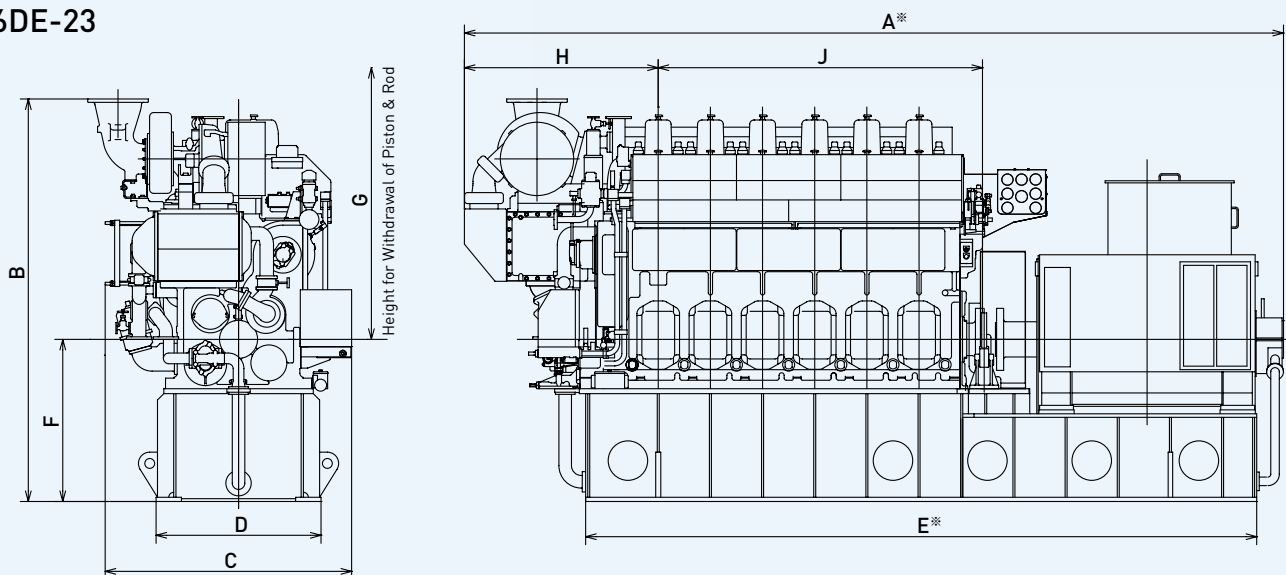


Main specifications

Model	Engine speed (min ⁻¹)		Output	
			720/750	900
6DE-23	Engine	kWm	1280	1500
	Generator	kWe	1215	1425

The generator output values are based on power generation efficiency of approximately 95%.

6DE-23



Dimensions and weights

Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DE-23	6100	2840	1780	1020	5040	1150	1660	1400	2300	23.0

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DEL-23

Main data

Cylinder bore : 230mm
 Piston stroke : 350mm
 No. of cylinder : 8
 Pme : 2.41~2.52MPa
 Piston speed : 10.5m/sec. (at 900min⁻¹)
 8.4m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO



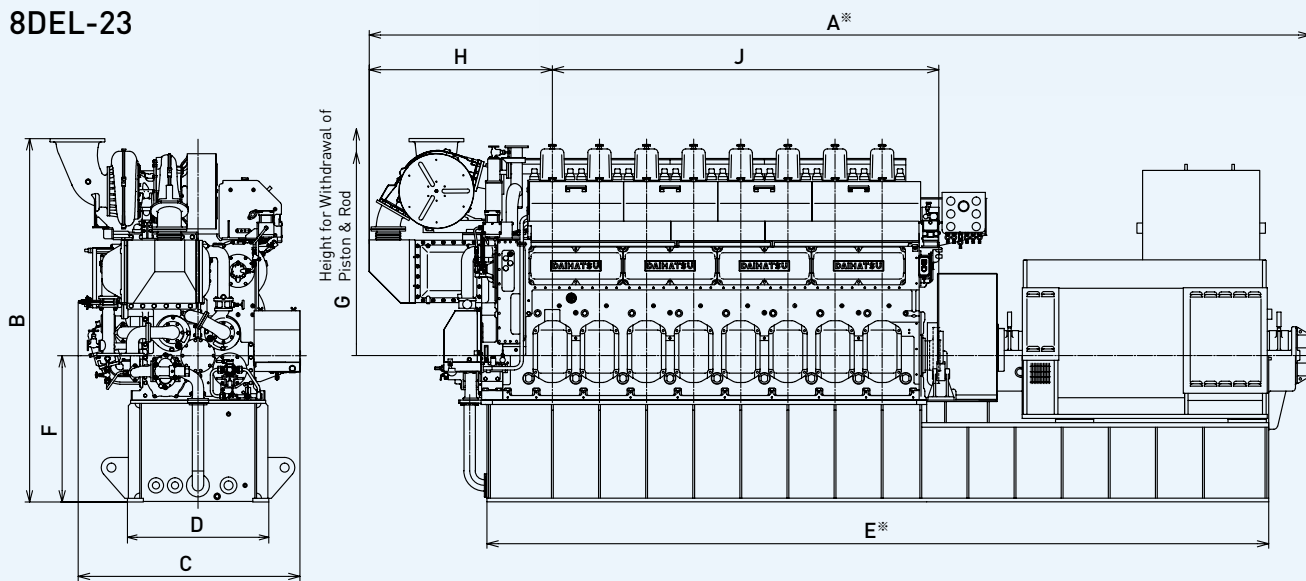
Output
 DE-18
 DE-20
 DE-23
 DEL-23
 DE-28
 DE-33
 DC-32e
 DK-20e
 DK-26e
 DK-28e
 DK-36e
 DL-16Ae
 M5
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 Network

Main specifications

Model	Engine speed (min ⁻¹)		Output	
		720/750	900	
8DEL-23	Engine	kWm	1750	2200
	Generator	kWe	1650	2080

The generator output values are based on power generation efficiency of approximately 95%.

8DEL-23



Dimensions and weights

Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
8DEL-23	7390	2860	1900	1110	6140	1150	1780	1440	3050	30.0

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DE-28

Main data

Cylinder bore : 285mm
 Piston stroke : 390mm
 No. of cylinder : 6, 8
 Pme : 2.33~2.43MPa
 Piston speed : 9.36m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

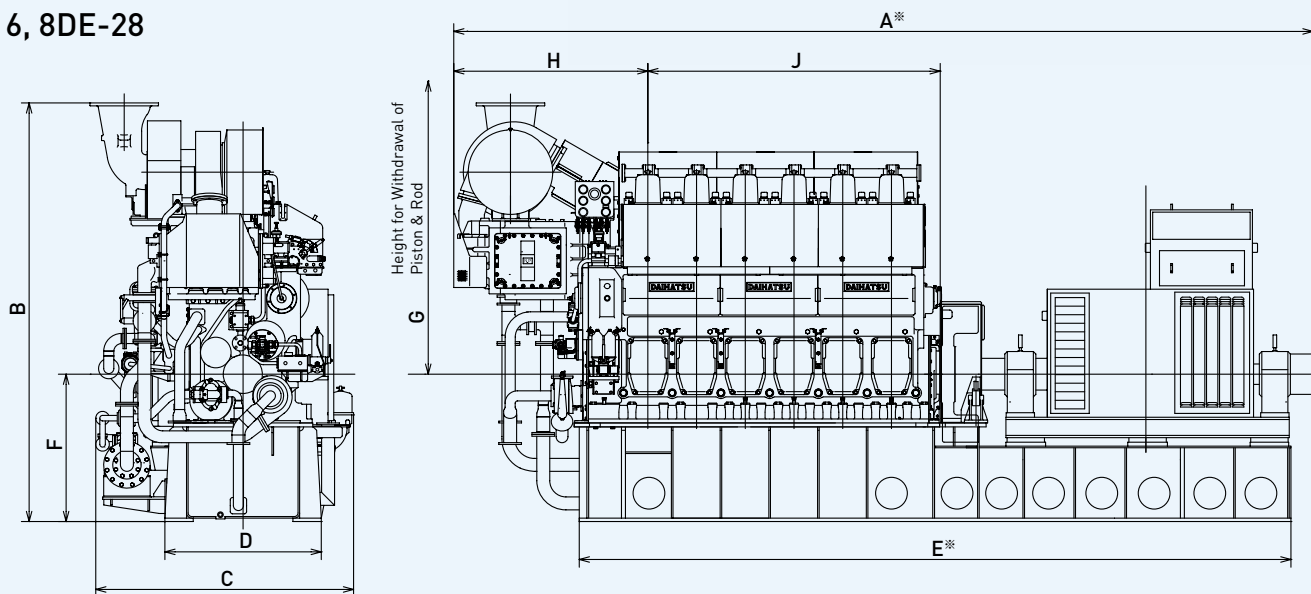


Main specifications

Model	Engine speed (min ⁻¹)		Output
6DE-28	Engine	kWm	2100
	Generator	kWe	2015
8DE-28	Engine	kWm	2800
	Generator	kWe	2690

The generator output values are based on power generation efficiency of approximately 96%.

6, 8DE-28



Dimensions and weights

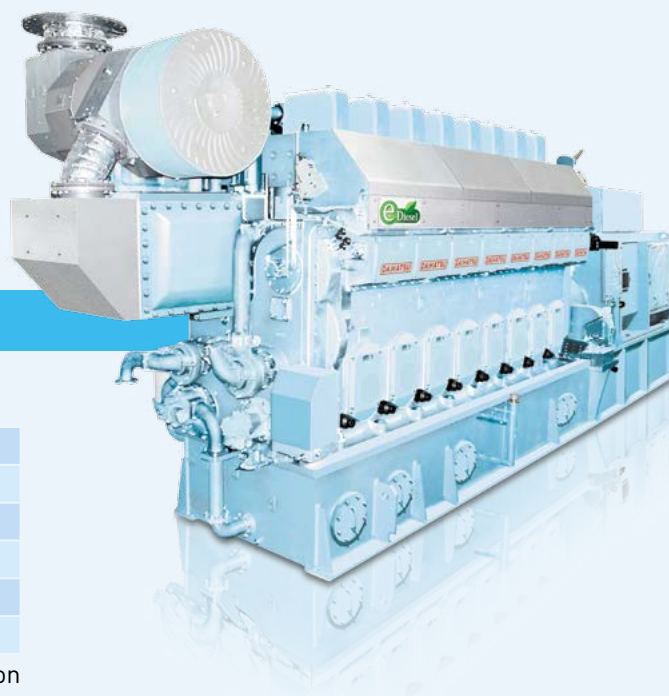
Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DE-28	6825	3710	2235	1230	6100	1300	2065	1095	2580	35.0
8DE-28	7865	3830			6780				3440	

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DE-33

Main data

Cylinder bore : 330mm
 Piston stroke : 440mm
 No. of cylinder : 6, 8
 Pme : 2.66MPa
 Piston speed : 10.56m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO



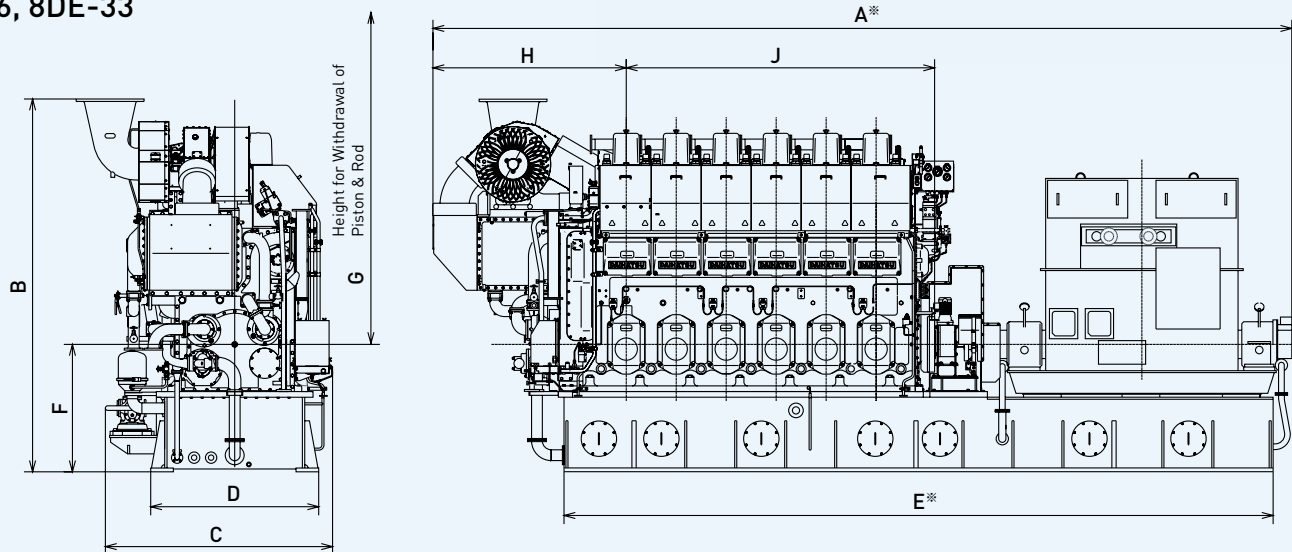
Output
 DE-18
 DE-20
 DE-23
 DEL-23
 DE-28
 DE-33
 DC-32e
 DK-20e
 DK-26e
 DK-28e
 DK-36e
 DL-16Ae
 M5
 Equipment
 Factories
 Network

Main specifications

Model	Engine speed (min ⁻¹)		Output
6DE-33	Engine	kWm	3600
	Generator	kWe	3475
8DE-33	Engine	kWm	4800
	Generator	kWe	4630

The generator output values are based on power generation efficiency of approximately 96.5%.

6, 8DE-33



Dimensions and weights

Model	Dimension (mm)									Dry Weight [※] (ton)
	A	B	C	D	E	F	G	H	J	
6DE-33	9110	3950	2410	1780	7520	1350	2570	2050	3270	69.1
8DE-33	10390	4150			8800				4330	

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DC-32e

Main data

Cylinder bore : 320mm
 Piston stroke : 400mm
 No. of cylinder : 6, 8, 12, 16
 Pme : 2.59MPa
 Piston speed : 9.6m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

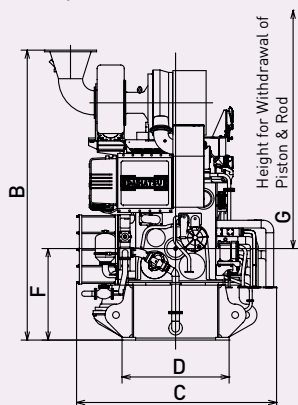


Main specifications

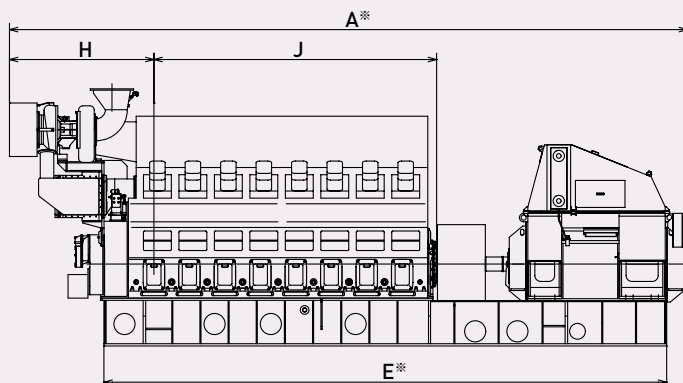
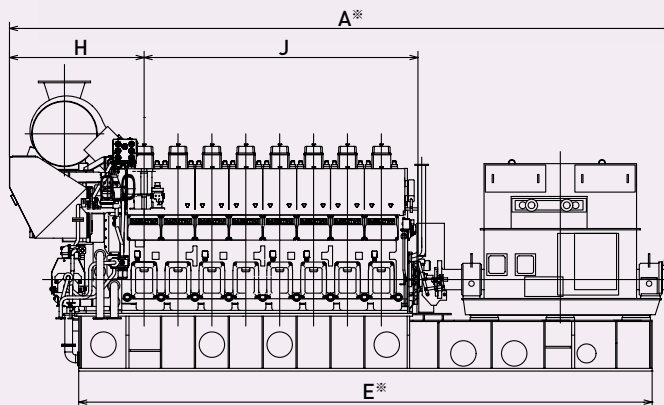
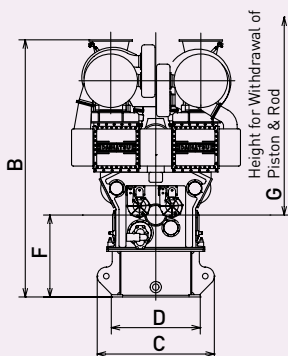
Model	Engine speed (min ⁻¹)		Output
	Engine	Generator	
6DC-32e	kWm		720/750
		kWe	3000
8DC-32e	kWm		4000
		kWe	3860
12DC-32e	kWm		6000
		kWe	5790
16DC-32e	kWm		8000
		kWe	7720

The generator output values are based on power generation efficiency of approximately 96.5%.

6, 8DC-32e



12, 16DC-32e



Dimensions and weights

Model	Dimension (mm)									Dry Weight [※] (ton)
	A	B	C	D	E	F	G	H	J	
6DC-32e	8295	3820	2345	1350	7275	1350	2295	1685	3040	58.0
8DC-32e	9580	4020			8700					
12DC-32e	10350	4735	2400	1480	9500	1550	2830	2500	4000	115.0
16DC-32e	12000				10500					

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DK-20e

Main data

Cylinder bore : 200mm
 Piston stroke : 300mm
 No. of cylinder : 6
 Pme : 2.16~2.45MPa
 Piston speed : 9.00m/sec. (at 900min⁻¹)
 7.20m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO



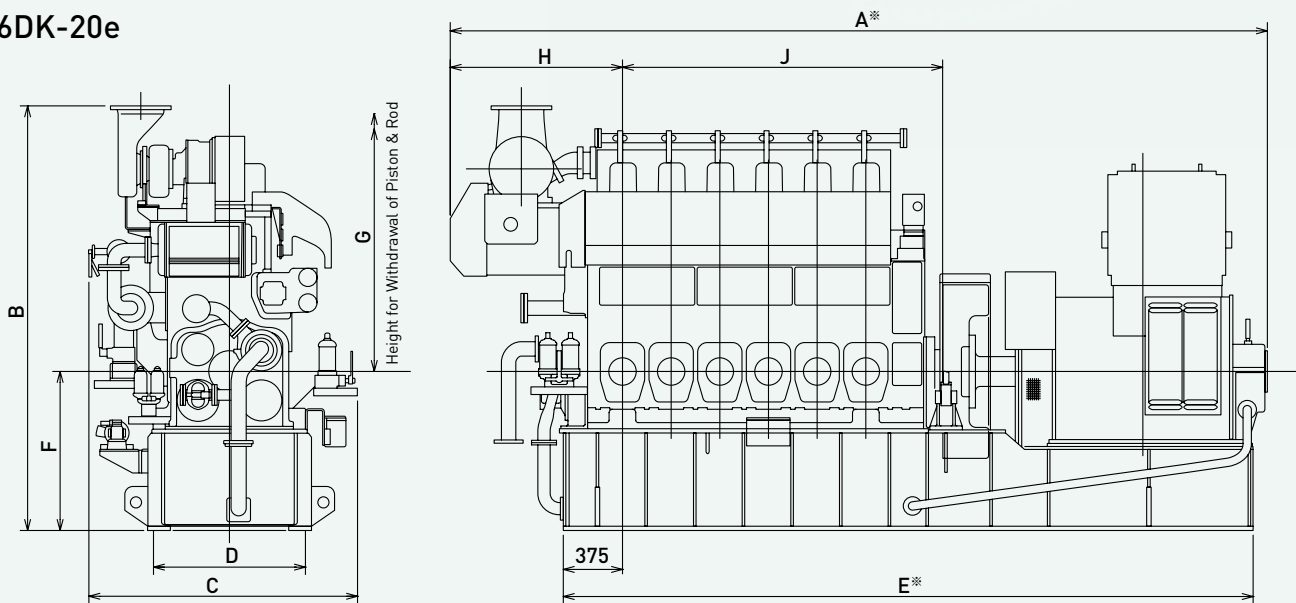
Output
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 DEL-23
 DE-28
 DE-33
 DC-32e
 DK-20e
 DK-26e
 DK-28e
 DK-36e
 DL-16Ae
 M5
 Equipment
 Factories
 Network

Main specifications

Model	Engine speed (min ⁻¹)		Output	
		720/750	900	
6DK-20e	Engine	kWm	800	1040
	Generator	kWe	760	990

The generator output values are based on power generation efficiency of approximately 95%.

6DK-20e



Dimensions and weights

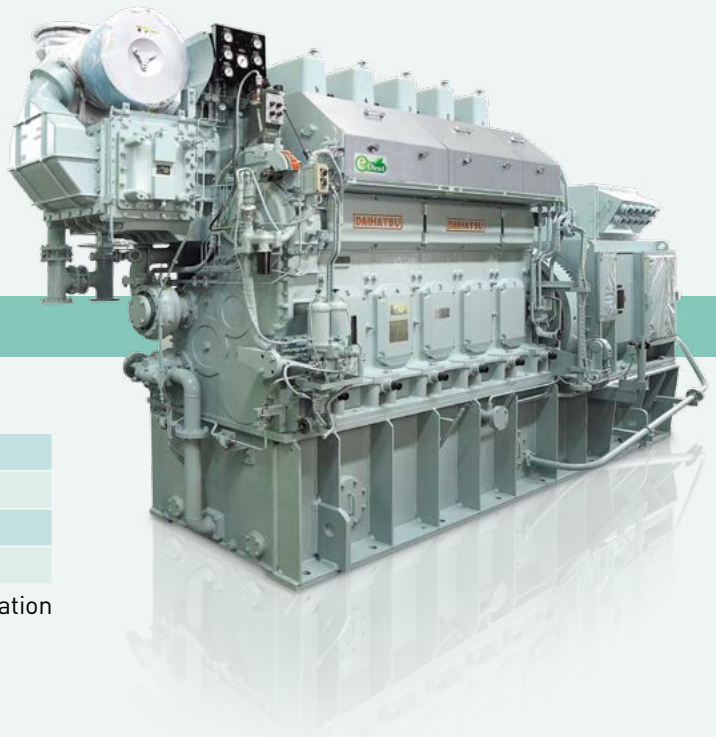
Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DK-20e	5480	2890	1800	960	4430	1000	1575	1240	2035	16.0

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DK-26e

Main data

Cylinder bore : 260mm
 Piston stroke : 380mm
 No. of cylinder : 6
 Pme : 2.11~2.43MPa
 Piston speed : 9.12m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

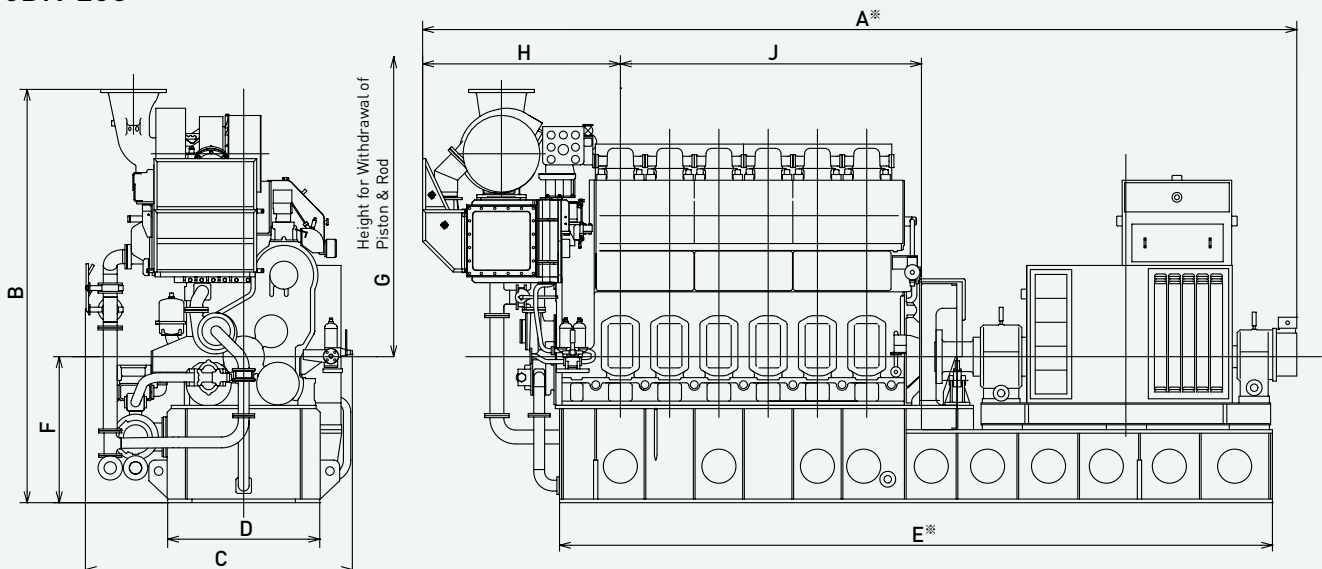


Main specifications

Model	Engine speed (min ⁻¹)		Output
	6DK-26e	Engine	kWm
Generator		kWe	1765

The generator output values are based on power generation efficiency of approximately 96%.

6DK-26e



Dimensions and weights

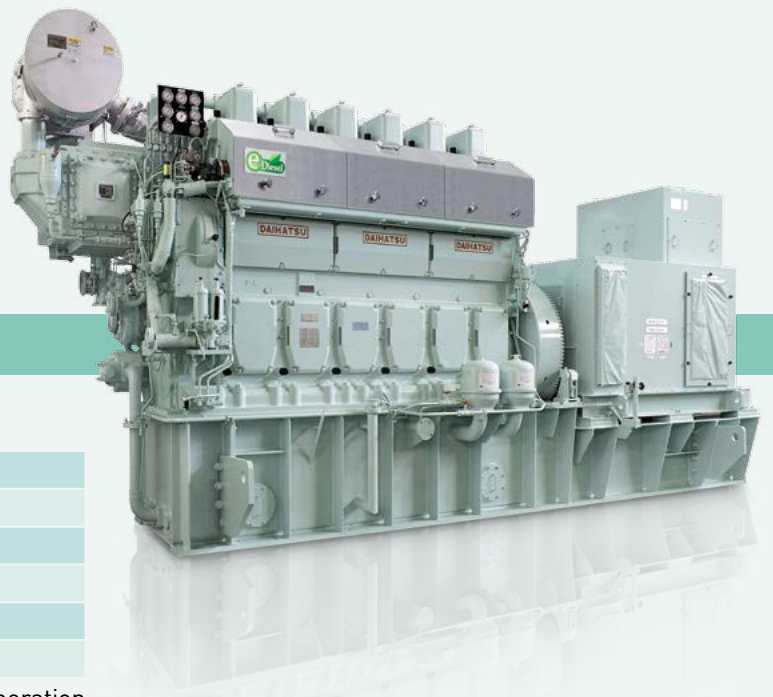
Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DK-26e	6465	3310	1990	1190	5400	1200	1970	1580	2470	30.0

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DK-28e

Main data

Cylinder bore : 280mm
 Piston stroke : 390mm
 No. of cylinder : 6, 8
 Pme : 2.33~2.43MPa
 Piston speed : 9.36m/sec. (at 720min⁻¹)
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

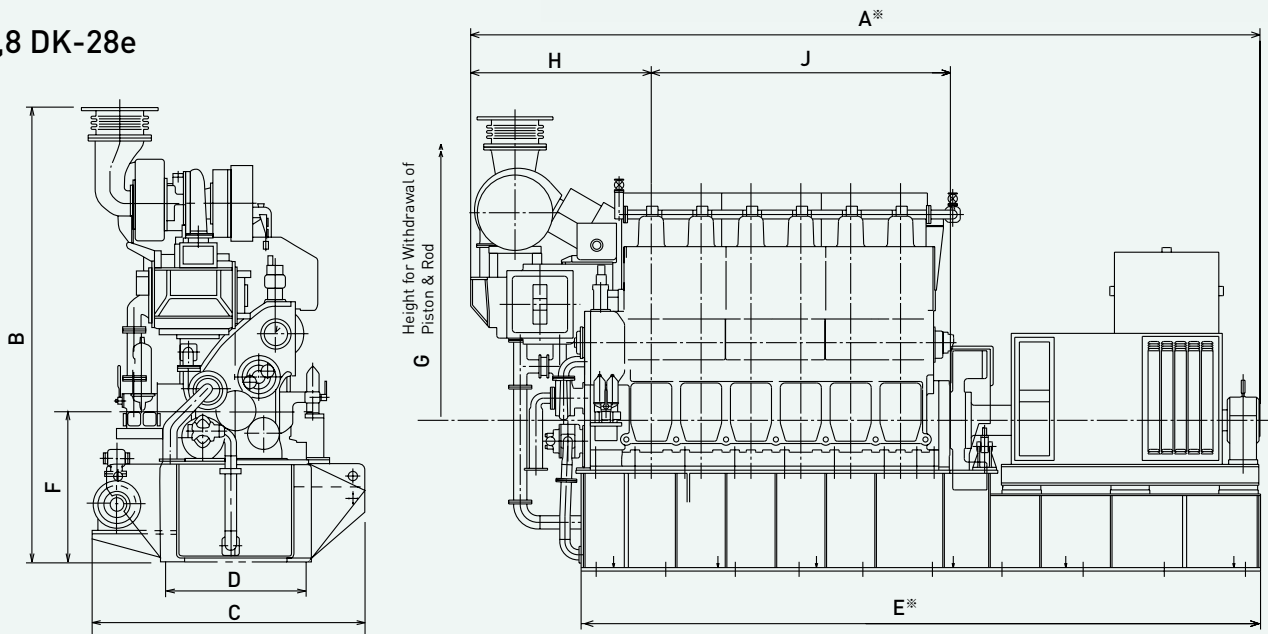


Main specifications

Model	Engine speed (min ⁻¹)		Output
6DK-28e	Engine	kWm	2100
	Generator	kWe	2015
8DK-28e	Engine	kWm	2800
	Generator	kWe	2690

The generator output values are based on power generation efficiency of approximately 96%.

6,8 DK-28e



Dimensions and weights

Model	Dimension (mm)									Dry Weight [※] (ton)
	A	B	C	D	E	F	G	H	J	
6DK-28e	6825	3710	2235	1230	6100	1300	2065	1095	2580	35.0
8DK-28e	7865	3830			6780				3440	

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DK-36e

Main data

Cylinder bore : 360mm
 Piston stroke : 6,8DK; 480mm, 12DK; 460mm
 No. of cylinder : 6, 8 (in-line), 12 (Vee)
 Pme : 2.30~2.39MPa
 Piston speed : 6,8DK; 9.60m/sec. 12DK; 9.20m/sec.
 Fuel oil : MDO~up to 700mm²/s/50°C HFO

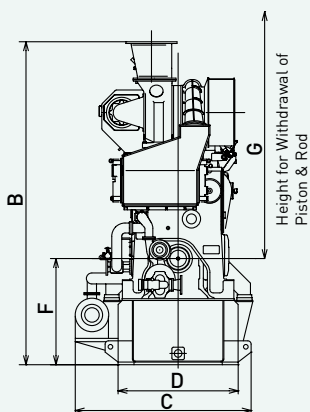


Main specifications

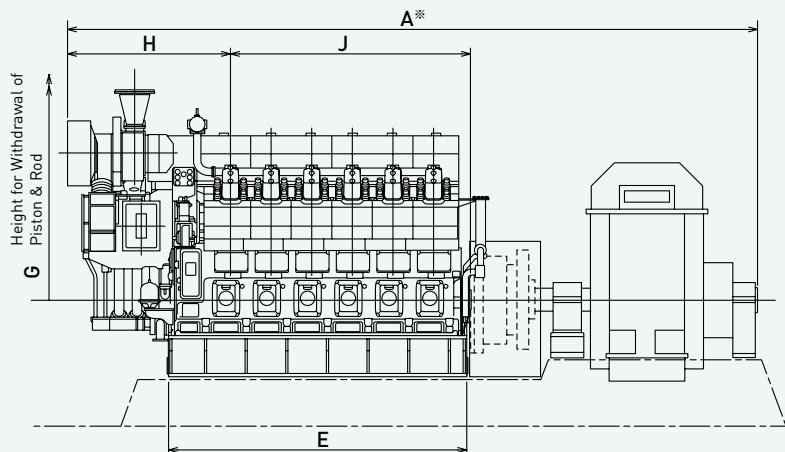
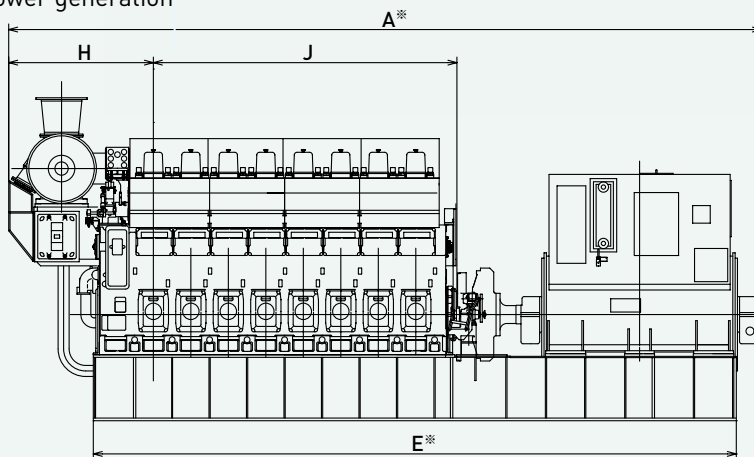
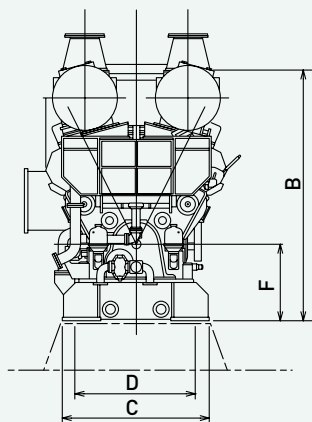
Model			Output
	Engine speed (min ⁻¹)		600
6DK-36e	Engine	kWm	3500
	Generator	kWe	3380
8DK-36e	Engine	kWm	4500
	Generator	kWe	4345
12DK-36e	Engine	kWm	6600
	Generator	kWe	6370

The generator output values are based on power generation efficiency of approximately 96.5%.

6, 8DK-36e



12DK-36e



Dimensions and weights

Model	Dimension (mm)									Dry Weight [※] (ton)
	A	B	C	D	E	F	G	H	J	
6DK-36e	7500	3818	3360	2300	7400	1800	2930	1965	3445	73.0
8DK-36e	9430	4280	2500		7900	1325	2710	2764	4575	95.0
12DK-36e	11728				5065 _{Eng only}				4074	85.0 _{Eng only}

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

DL-16Ae

Main data

Cylinder bore : 165mm
 Piston stroke : 210mm
 No. of cylinder : 6
 Pme : 1.97MPa
 Piston speed : 8.4m/sec.
 Fuel oil : MDO

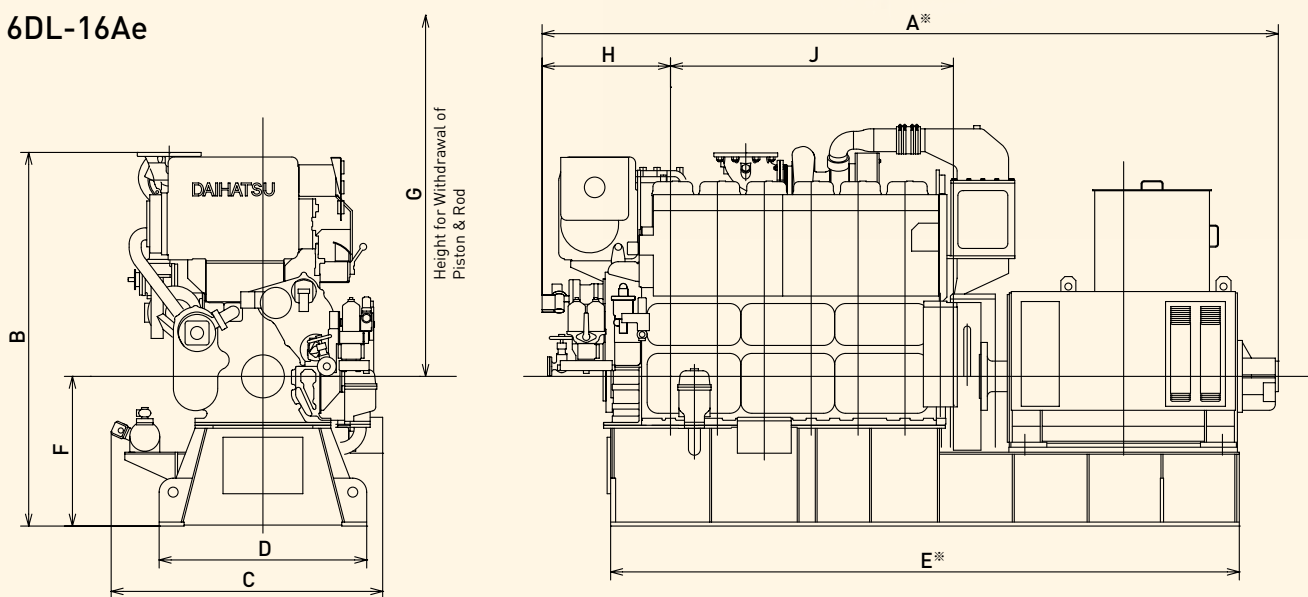


Main specifications

Model	Output		
	Engine speed (min ⁻¹)	1200	
6DL-16Ae	Engine	kWm	530
	Generator	kWe	480

The generator output values are based on power generation efficiency of approximately 91%.

6DL-16Ae



Dimensions and weights

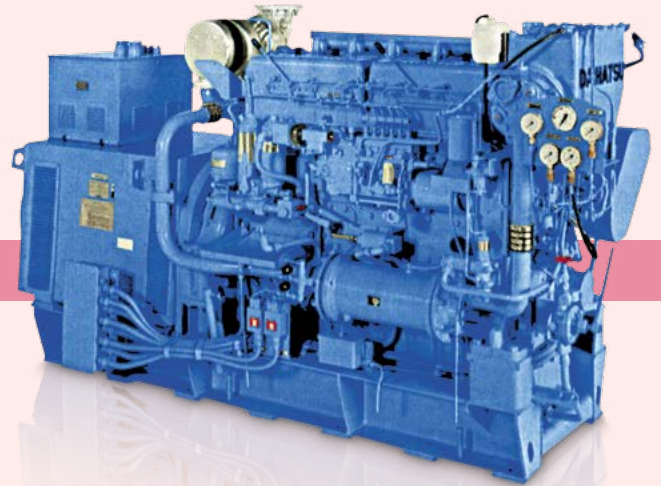
Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
6DL-16Ae	3700	1800	1230	960	3260	750	1195	645	1418	5.9

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

M5

Main data

Cylinder bore : 145mm
 Piston stroke : 160mm
 No. of cylinder : 6
 Pme : 1.97MPa
 Piston speed : 8.40m/sec.
 Fuel oil : MDO

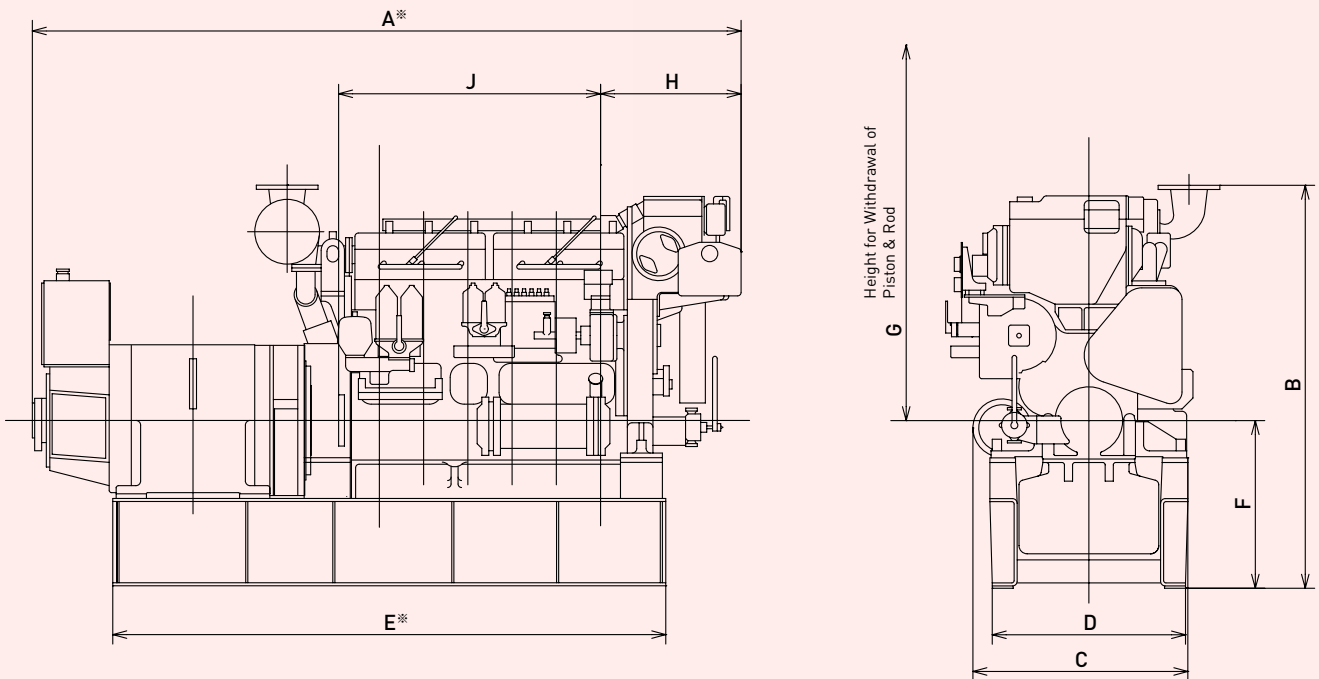


Main specifications

Model	Engine speed (min ⁻¹)	Output	
		Engine kWm	Generator kWe
M5	1200	265	1800
	1800	353	320

The generator output values are based on power generation efficiency of approximately 91%.

M5



Dimensions and weights

Model	Dimension (mm)									Dry Weight ^{**} (ton)
	A	B	C	D	E	F	G	H	J	
M5	3210	1711	1135	840	2550	720	1130	628	1125	4.2

※ Actual dimensions and weights may vary depending on the specifications of the generator unit.

The DAIHATSU-DEC Marine SCR System engineered to achieve the highest levels of space saving and running cost reduction

Marine diesel engines installed on ocean navigating ships must be gentle to the global environment at all times. Daihatsu SCR system decomposes NOx contained in the engine exhaust gas using chemical reaction and makes the exhaust gas clean. Daihatsu Diesel adopted a patented bypass-integrated structure and optimized the electronic control and operation devices to enable easy onboard installation, save installation space and reduce running cost.



1 NOx removal performance compliant with IMO NOx Tier III standards

2 Compact design for easy onboard installation

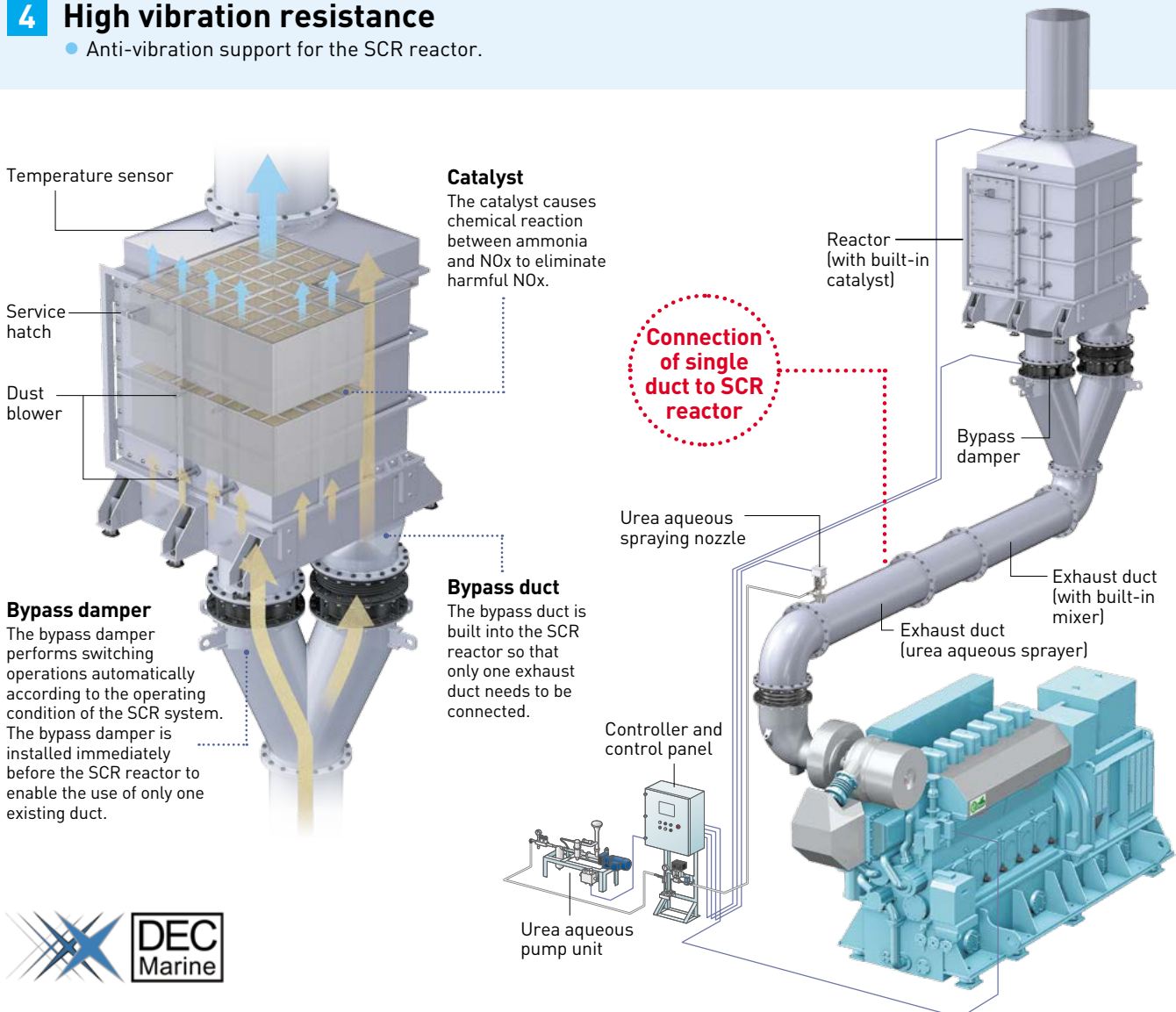
- The SCR reactor can be mounted vertically or horizontally. (*Horizontal mounting is possible for models up to SCR81B.)
- A unique nozzle sprays urea aqueous microparticles to reduce the vaporization distance.
- A built-in auto-switching bypass damper reduces duct connection to only two locations: inlet and outlet.

3 Low running cost

- The unique nozzle and electronically controlled auto-operation optimize the amount of urea aqueous spraying.

4 High vibration resistance

- Anti-vibration support for the SCR reactor.



Inboard production of high-purity urea water from urea powder and pure water

A device that produces on-board the aqueous urea solution that is required as a reducing agent for the SCR (Selective Catalytic Reduction) system has been developed. Since it generates only the necessary amount of aqueous urea solution at the necessary time from pure water and urea powder, there are no concerns about degradation, and a solution of consistently stable quality can be supplied. Also, because there is no need for large tanks to store the solution in liquid form, it offers space-saving storage, and the procurement of urea powder is economical.

1 Dispense with large, space-consuming AUS storage tanks

- Large on-board tanks storing the entire voyage's quota of AUS are no longer needed. Although a buffer tank will be required to provide AUS this tank is far smaller than the aforementioned storage tanks.
- The space of urea powder up less than half the space of AUS.

2 Save money on your AUS

- AUS produced from urea powder is cheaper than buying AUS already in its liquid form.

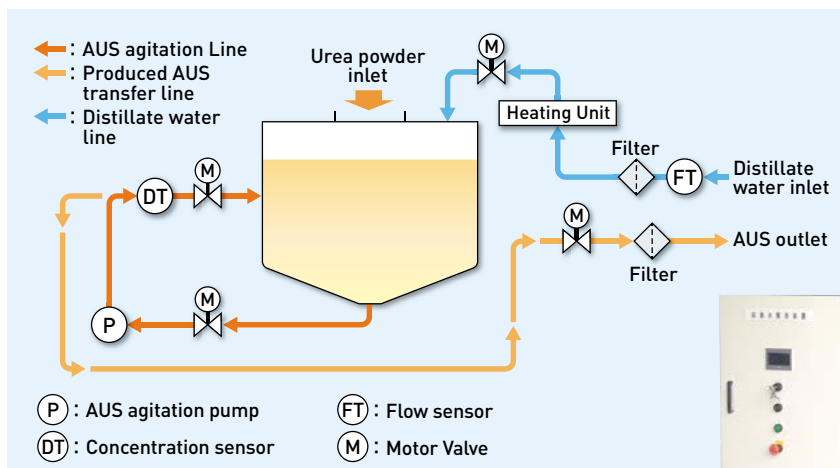
3 Loading urea powder is easier than loading AUS

- In order to load AUS, an Intermediate Bulk Container (IBC) and pump are required to transfer the AUS from the container to the tank. With powder these are not needed.

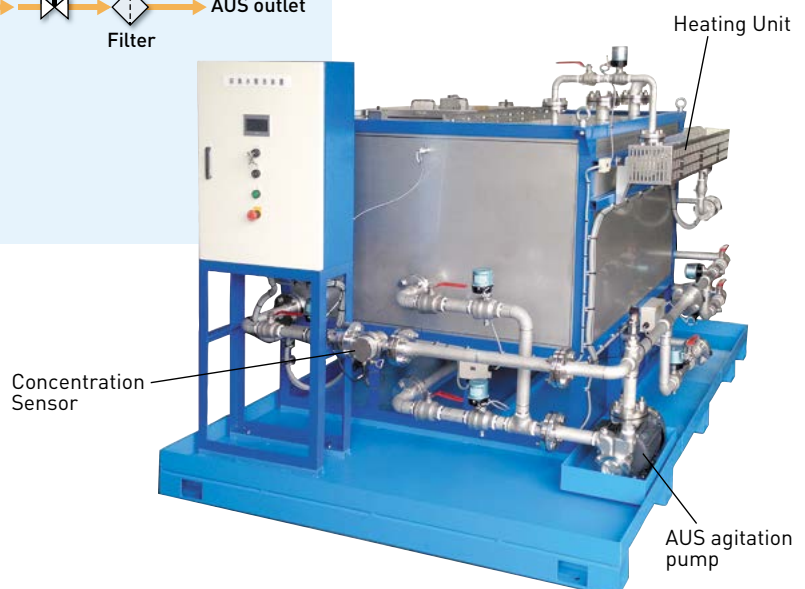
4 The same high quality AUS every time

- Storing AUS for extended periods risks exposing it to temperature fluctuations that decrease its quality and shelf-life. Producing AUS from powdered urea when it is needed maintains the AUS quality and helps to prevent the SCR's catalyst from becoming stained or obstructed.

Structure



The material of pipe, valve, and fittings shall be made of stainless steel from urea solution outlet to shipyard storage tank.



Engine Controller

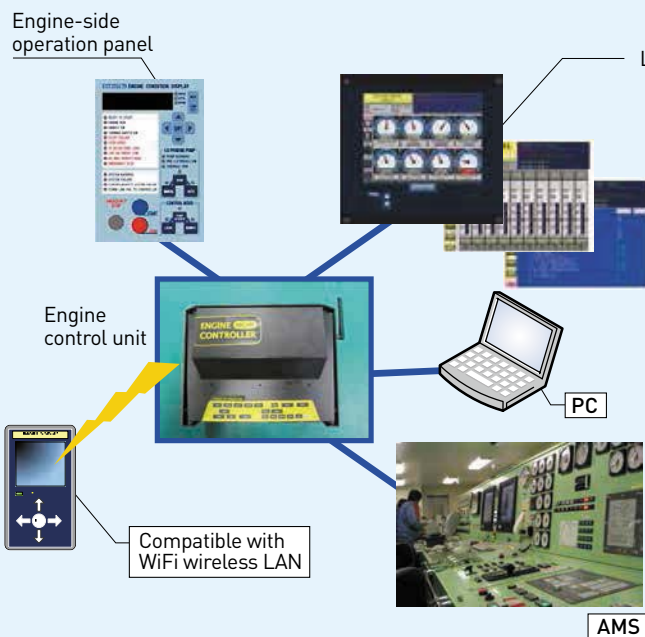
Improving engine reliability

An engine safety/control system for next-generation engines

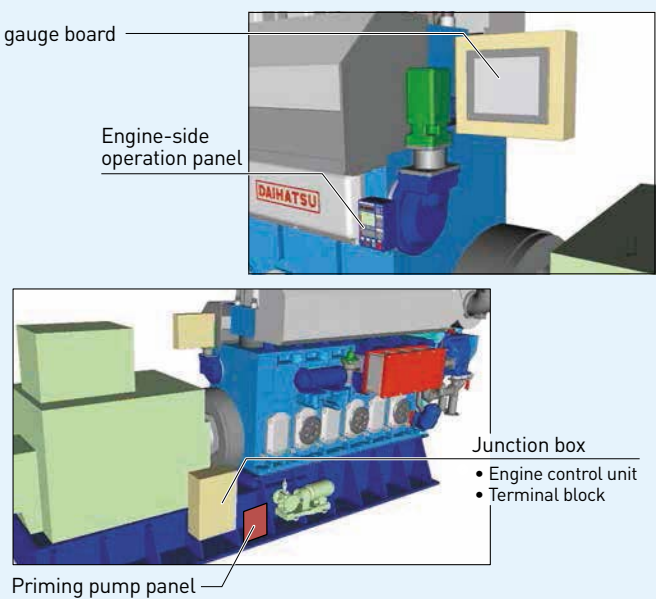
The engine safety/control system ensures safe and reliable engine operation based on the control/safety sequence verified by Daihatsu. The circuits are protected so as to prevent faulty operation even if a mistake is made in the installation. The system automatically saves the record of engine control device operations (events) and the trend data. This enables accurate understanding of symptoms when engine trouble occurs, thus allowing swift and efficient investigation of the problem causes.

Since the product was developed for a long-term use, there is no need for replacement parts.

Links between the engine control unit and other devices



Example installation on engine



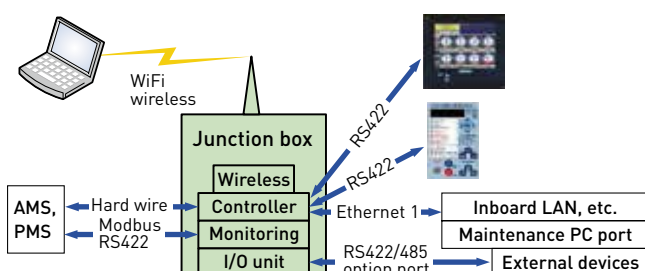
Pursuit of safety, security, and ease of use for the owner and the crew

1. Ease of operation and safety circuits ensure security during engine operation.
2. If a problem occurs with the controller, recovery is simple and quick. Simply replace the main assembly and insert a new memory card.
3. A web server is provided as a standard feature. Connect a browser to the server for easy checking of the engine condition.
4. Engine condition data can be downloaded easily in the event of an engine problem. Sending the data to Daihatsu allows our service personnel to conduct a preliminary investigation before visiting the site.

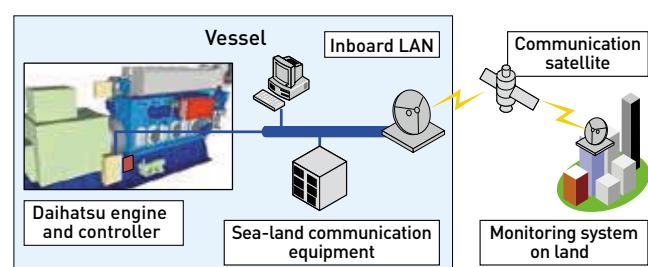
Meeting the users' needs

1. The engine controller has an industry standard Modbus-RTU/RS422 communication port to connect to the Alarm Monitoring System (AMS) to reduce wiring.
2. The priming pump control panel is engine-mounted as a standard feature to eliminate the need for separate procurement.
3. The safety and control functions provided on the engine controller simplify commissioning. Simplified generator panels cut costs and reduce the installation space required.
4. An Ethernet port is provided as a standard feature to flexibly meet future needs of shipbuilders, such as connection with onboard LAN and server and interaction with sea-land communication systems.

Engine controller input/output features



Connection to inboard system

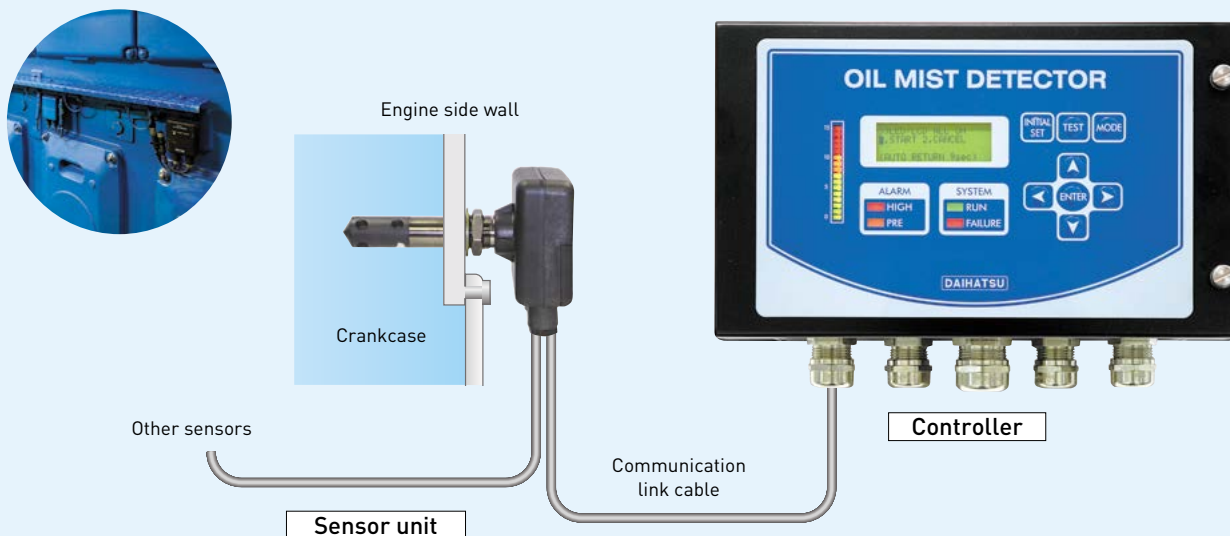




Oil mist detector

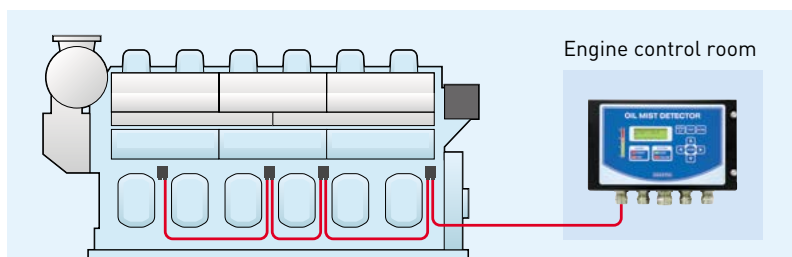
MD-SX (Sensor type)

Oil mist detectors for crankcase monitoring are required by classification societies as devices for the protection of internal combustion engines. Daihatsu Diesel's MD-SX oil mist detector is type-approved by NK, DNV GL, BV, LR, ABS, CCS, KR and LINA. The MD-SX responds better and is easier to install and maintain than the conventional pipe type. The standard model can be connected with up to 16 sensor points. The MD-SX II (connection of up to 9 sensor points) is designed exclusively for 4-stroke engines and provides excellent protection using a fewer sensor units.



MD-SX II

This product estimates the mist level in a crankcase not installed with a sensor unit from the data obtained from the sensors installed in the adjacent crankcases on both sides. Since it is highly responsive even with a reduced number of sensor units, installation costs can be minimized. The MD-SX II is also equipped with a self-diagnosis function to facilitate maintenance and provide extra safety assurance.



The optional sensor checker enables confirmation of the effectiveness of cleaning during maintenance and verification of proper operation of sensors. It is also possible to add a logging function to record oil mist concentration. Consequently, the MD-SX oil mist detector not only raises an alarm in a conventional manner when the oil mist concentration increases, but also enables the diagnosis and prediction of failure using log data.



Specifications

	Sensor unit	Controller
Function	Oil mist concentration & mist level output	Mist level indication & alarm monitoring
Detection point / No. of sensor unit	1Point / 1 Unit	16 units (max.) / 1Eng. (8 units x2Eng.)
Mist Detection / Detection time	Natural diffusion system / Continuous	Response time ≤ 1sec
Detection system / Concentration	Optical dispersion system	0-2.0mg / l
Display / Operation	3 color LEDs (Power, Alarm, Failure)	<ul style="list-style-type: none"> Mist level: 3-color bar-graph indication LED: 4 color LEDs (Run, Pre alarm, High alarm, Failure) LCD Key switch
Contact output		5 Points (AC125V-0.4A / DC24V-2A) (2×Pre alarm, 2×High alarm, Failure)
Power supply	Supply from controller	DC24V (+30%~-25%)
Power consumption	60mA (max.) / 1Unit	1.5A (max.) (internal:0.5A)
Protection class	IP 55	IP55
Weight	500g include ACCESSORY (NUT etc.)	4.0Kg
Paint color	Munsell N1.0 (Black)	Munsell N1.0 (Black)

Oil mist monitor DOMM

The DOMM installed in an engine room detects oil mist leakage at an early stage. It helps prevent fire resulting from the ignition of oil mist and also helps keep inboard environment safe and clean by preventing oil mist from adhering to equipment and walls to cause oil stains. The International Organization for Standardization (ISO) established the inspection standard for inboard oil mist detectors, "Atmospheric oil mist detectors for ship," in August 2012.

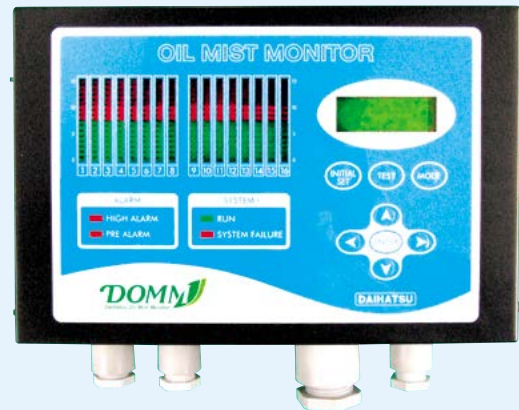
The DOMM can also be used any place in a ship where oil mist is generated. Since the sensors and controller are equipped with a self-diagnosis function just like our oil mist detector, the DOMM facilitates maintenance and provides extra safety assurance.



Sensor unit



Engine control room



Controller

Sensor Location (Example)



Beside rudder unit



Beside generator engine



Beside main engine's turbocharger

Specifications

	Sensor unit	Controller
Function	Oil mist concentration & mist level output	Mist level indication & alarm monitoring
Detection point / No. of sensor unit	1Point / 1 Unit	16 units (max.)
Mist Detection / Detection time	Suction type / Continuous	Response time ≤ 1sec
Detection system / Concentration	Optical dispersion system	0~1.2mg/l
Display / Operation	3 color LEDs (Power, Alarm, Failure)	<ul style="list-style-type: none"> Mist level : 3-color bar-graph indication LED: 4 color LEDs (Run, Pre alarm, High alarm, Failure) LCD •Key switch
Contact output		5 Points (AC125V-0.4A / DC24V-2A) (2×Pre alarm, 2×High alarm, Failure)
Power supply	Supply from controller	DC24V (+30%~-25%)
Power consumption	230mA(max.) / 1 set (Sensor unit 60 mA (max.) / 1 Unit)	4.2 A (max.) (internal : 0.5 A)
Protection class	IP 55 (Except a fan hood)	IP55
Weight	About 2.3Kg (Sensor unit : about 500g)	4.0Kg
Paint color	Munsell N1.0 (Black)	Munsell N1.0 (Black)

From Moriyama and Himeji to the world

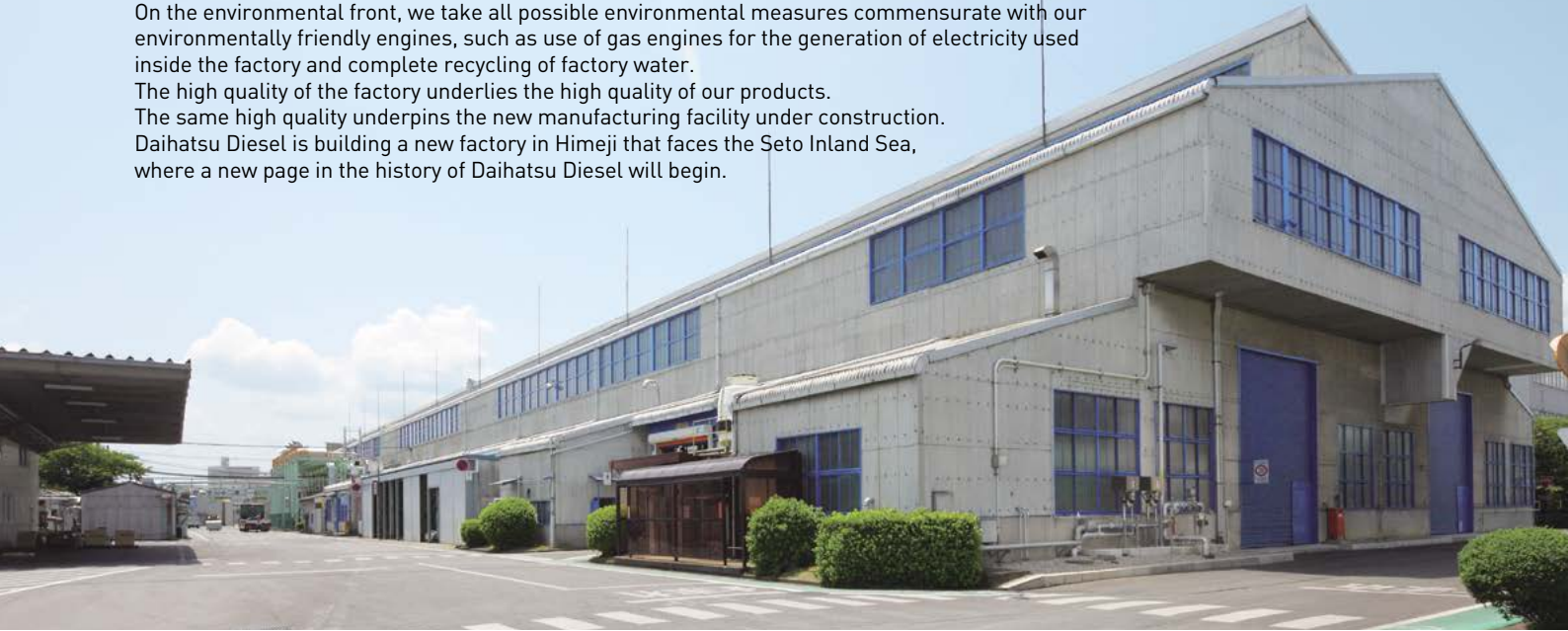
Daihatsu Diesel's Moriyama Factory manufactures products using the production system that takes full advantage of our expertise and experience accumulated over many years, in order to assure high levels of quality and performance in engines that will set out on journeys around the world.

On the environmental front, we take all possible environmental measures commensurate with our environmentally friendly engines, such as use of gas engines for the generation of electricity used inside the factory and complete recycling of factory water.

The high quality of the factory underlies the high quality of our products.

The same high quality underpins the new manufacturing facility under construction.

Daihatsu Diesel is building a new factory in Himeji that faces the Seto Inland Sea, where a new page in the history of Daihatsu Diesel will begin.



Moriyama Factory

Facilities/Equipment



Training Center



Technology Development Center



Research building



Photovoltaic power generation



Logistics Center



Historical Literature Museum



Power recovery system



New Himeji Factory Scheduled to commence operation in October 2018

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